

CAS ONLINE PRINTOUT

=> d his

(FILE 'HOME' ENTERED AT 08:27:02 ON 31 MAY 2007)

FILE 'REGISTRY' ENTERED AT 08:27:19 ON 31 MAY 2007

L1 STRUCTURE UPLOADED
L2 0 S L1
L3 0 S L1 FUL
L4 STRUCTURE UPLOADED
L5 0 S L4

FILE 'USPATFULL' ENTERED AT 08:30:59 ON 31 MAY 2007

FILE 'CAPLUS' ENTERED AT 08:31:04 ON 31 MAY 2007

E US 20050288468/PN

L6 1 S E3
SELECT RN L6 1

FILE 'REGISTRY' ENTERED AT 08:31:24 ON 31 MAY 2007

L7 41 S E1-E41

FILE 'REGISTRY' ENTERED AT 08:33:16 ON 31 MAY 2007

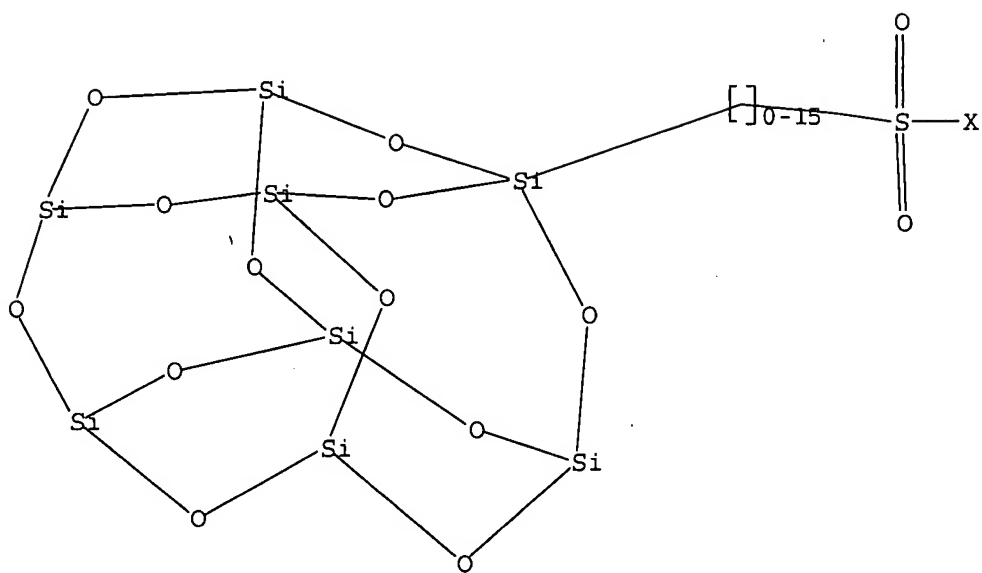
L8 STRUCTURE UPLOADED
L9 0 S L8
L10 STRUCTURE UPLOADED
L11 STRUCTURE UPLOADED
L12 50 S L11
L13 0 S L10 FUL
L14 1965 S L11 FUL
L15 STRUCTURE UPLOADED
L16 STRUCTURE UPLOADED
L17 1 S L16
L18 14 SEARCH L16 SSS SUB=L14 FULL
L19 STRUCTURE UPLOADED
L20 0 SEARCH L19 SSS SUB=L14 FULL
L21 STRUCTURE UPLOADED
L22 0 SEARCH L21 SSS SUB=L14 FULL
L23 STRUCTURE UPLOADED
L24 19 SEARCH L23 SSS SUB=L14 FULL

FILE 'CAPLUS' ENTERED AT 08:49:56 ON 31 MAY 2007

=> d l10

L10 HAS NO ANSWERS

L10 STR

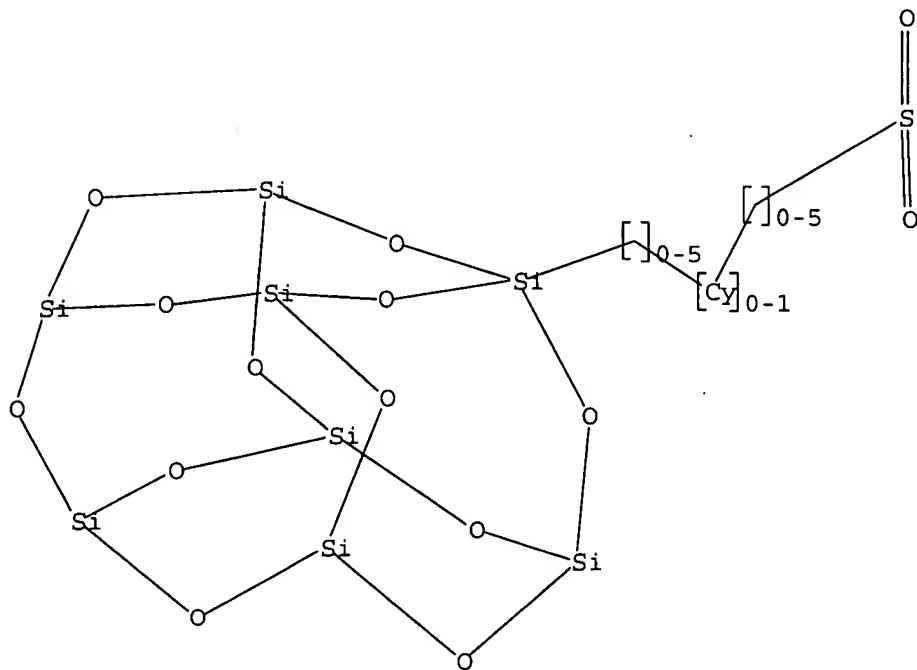


Structure attributes must be viewed using STN Express query preparation.

=> d 123

L23 HAS NO ANSWERS

L23 STR



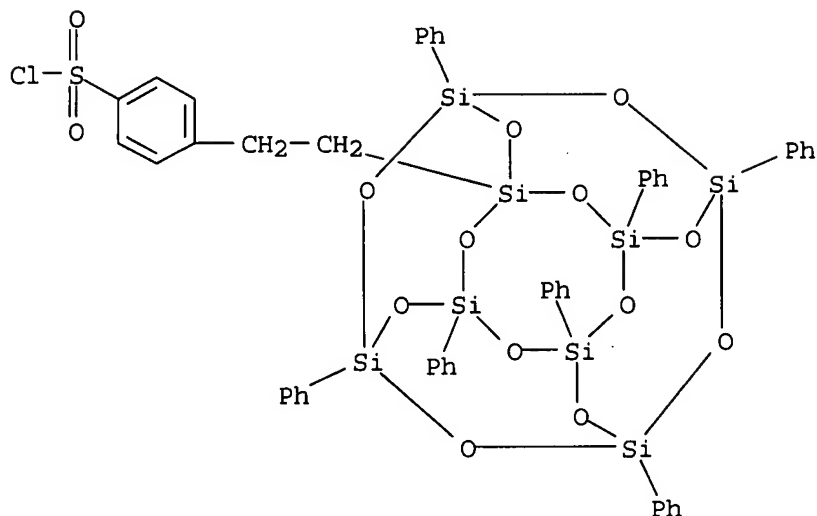
Structure attributes must be viewed using STN Express query preparation.

=> s 124

L25 5 L24

=> d bib abs hitstr 125 1-5

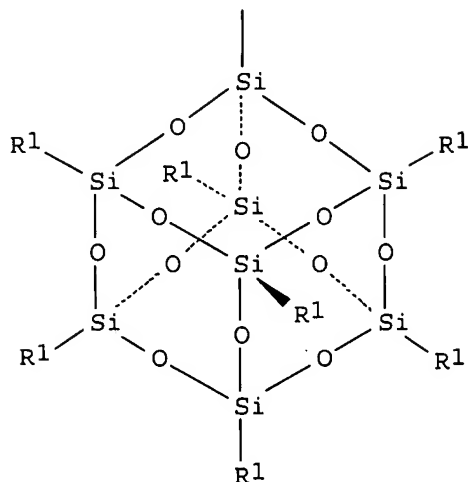
L25 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:874865 CAPLUS
DN 142:56733
TI Living Radical Polymerization by Polyhedral Oligomeric
Silsesquioxane-Holding Initiators: Precision Synthesis of Tadpole-Shaped
Organic/Inorganic Hybrid Polymers
AU Ohno, Kohji; Sugiyama, Satoshi; Koh, Kyoungmoo; Tsujii, Yoshinobu; Fukuda,
Takeshi; Yamahiro, Mikio; Oikawa, Hisao; Yamamoto, Yasuhiro; Ootake,
Nobumasa; Watanabe, Kenichi
CS Institute for Chemical Research, Kyoto University, Uji, Kyoto, 611-0011,
Japan
SO Macromolecules (2004), 37(23), 8517-8522
CODEN: MAMOBX; ISSN: 0024-9297
PB American Chemical Society
DT Journal
LA English
AB Incompletely condensed polyhedral oligomeric silsesquioxane (POSS) with
the highly reactive group of trisodium silanolate was used for the
synthesis of two initiators for atom transfer radical polymerization, one with
a
2-bromoisobutyl group and the other with a chlorosulfonyl group. These
initiators were applied to solution polymns. of styrene and Me methacrylate
in the presence of a copper complex. In both systems, polymerization proceeded
in a living fashion, as indicated by the first-order kinetics of monomer
consumption, the evolution of mol. weight in direct proportion to monomer
conversion, the good agreement of mol. weight with the theor. one, and the
low polydispersity, thus providing tadpole-shaped polymers with an "inorg.
head" of POSS and an "organic tail" of well-defined polymer.
Thermogravimetric and differential scanning calorimetric studies showed
that both thermal degradation and glass transition temps. of the organic/inorg.
hybrid polymers with mol. wts. up to about 20 000 were enhanced as
compared to those of model polymers without the POSS moiety.
IT 660392-78-9P
RL: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent); USES (Uses)
(in preparation of living radical polymerization polyhedral oligomeric
silsesquioxane-holding initiators)
RN 660392-78-9 CAPLUS
CN Benzenesulfonyl chloride, 4-[2-(heptaphenylpentacyclo[9.5.1.13,9.15,15.17,
13]octasiloxanyl)ethyl]- (9CI) (CA INDEX NAME)



RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:779219 CAPLUS
DN 141:285810
TI Positive-working resist composition containing acrylic resin with
polyhedral oligomeric silsesquioxane group
IN Adegawa, Yutaka
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 55 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	JP 2004264479	A	20040924	JP 2003-53704	20030228
PRAI	JP 2003-53704		20030228		
GI					



I

AB The composition contains (A) an acrylic resin decomposable by acid for increasing solubility to alkaline developer and comprising (a1) a repeating unit

bearing I [R1 = (un)substituted, (branched) or (cyclic) alkyl] and (a2) (meth)acrylic acid ester repeating unit containing >0 mol% of acrylic acid ester unit, and (B) a compound generating an acid by actinic ray irradiation. The composition, sensitive to far UV, shows high resolution, mask linearity,

and

less scum generation.

IT 760971-81-1P 760971-83-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pos.-working resist composition containing acrylic resin with polyhedral oligomeric silsesquioxane group)

RN 760971-81-1 CAPLUS

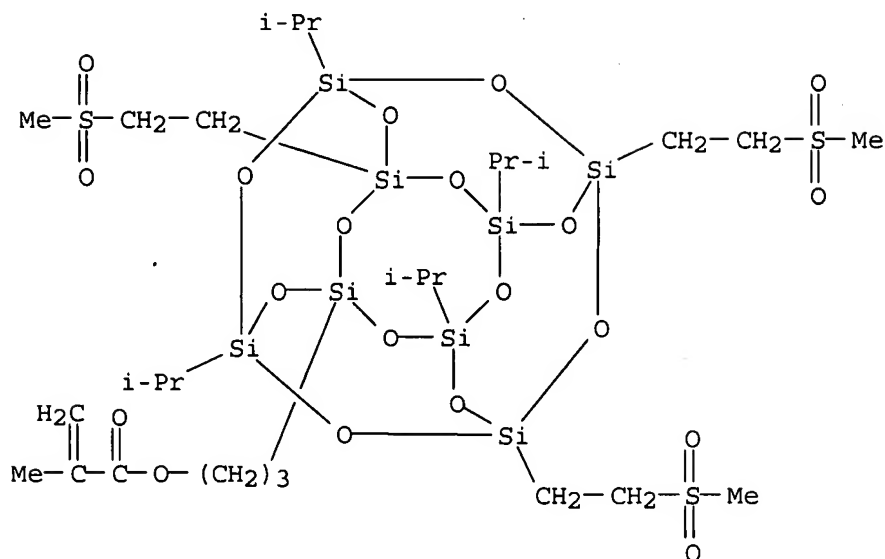
CN 2-Propenoic acid, 2-methyl-, 3-[3,5,11,13-tetrakis(1-methylethyl)-7,9,15-tris[2-(3-methylsulfonyl)ethyl]pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]propyl ester, polymer with 1,1-dimethylethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 760970-40-9

CMF C28 H60 O20 S3 Si8

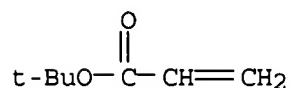
CAS ONLINE PRINTOUT



CM 2

CRN 1663-39-4

CMF C7 H12 O2



RN 760971-83-3 CAPLUS

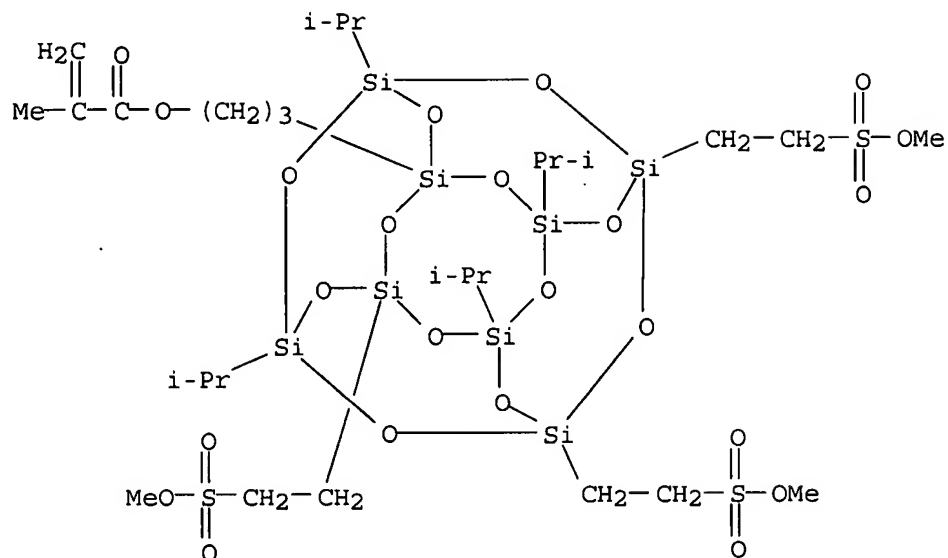
CN 2-Propenoic acid, 2-methyl-, 3-[3,7,13-tris[2-(methoxysulfonyl)ethyl]-5,9,11,15-tetrakis(1-methylethyl)pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]propyl ester, polymer with 1,1-dimethylethyl 2-propenoate (9CI)
(CA INDEX NAME)

CM 1

CRN 760970-42-1

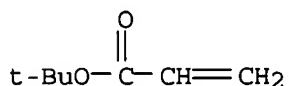
CMF C28 H60 O23 S3 Si8

CAS ONLINE PRINTOUT



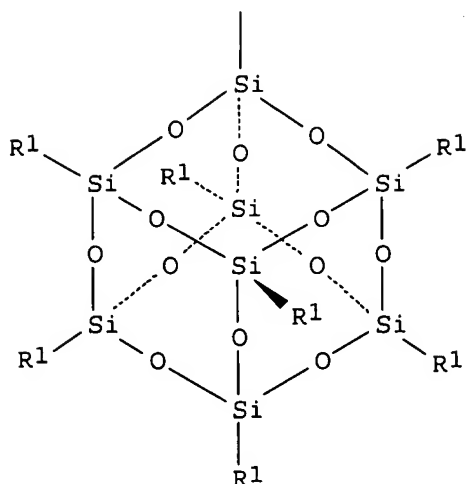
CM 2

CRN 1663-39-4
CMF C7 H12 O2



L25 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2004:779218 CAPLUS
 DN 141:285809
 TI Positive-working resist composition containing acrylic resin with lactone and polyhedral oligomeric silsesquioxane groups
 IN Adegawa, Yutaka
 PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 62 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004264478	A	20040924	JP 2003-53703	20030228
PRAI	JP 2003-53703		20030228		
GI					



AB The composition contains (A) a resin decomposable by acid for increasing solubility to alkaline developer and comprising a repeating unit bearing I [R1 = (un)substituted, (branched) or (cyclic) alkyl] and another unit bearing lactone structure, and (B) a compound generating an acid by actinic ray irradiation. The composition, sensitive to far UV, shows high resolution, mask linearity, and less scum generation.

IT 760970-41-0P 760970-43-2P 760970-48-7P
760970-49-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pos. resist composition containing alkali-soluble acrylic resin with lactone and POSS groups)

RN 760970-41-0 CAPLUS

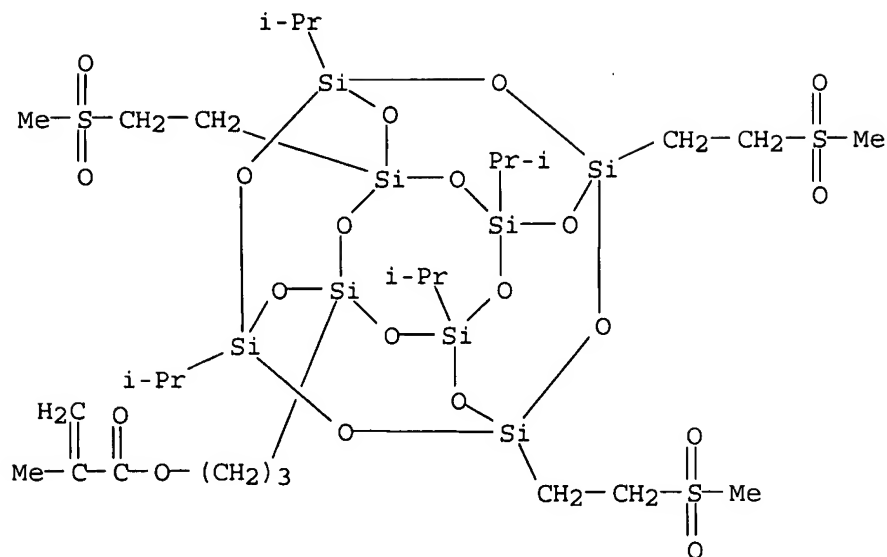
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate and 3-[3,5,11,13-tetrakis(1-methylethyl)-7,9,15-tris[2-(methylsulfonyl)ethyl]pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 760970-40-9

CMF C28 H60 O20 S3 Si8

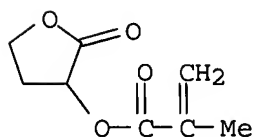
CAS ONLINE PRINTOUT



CM 2

CRN 195000-66-9

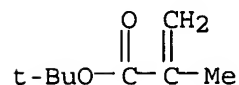
CMF C8 H10 O4



CM 3

CRN 585-07-9

CMF C8 H14 O2



RN 760970-43-2 CAPLUS

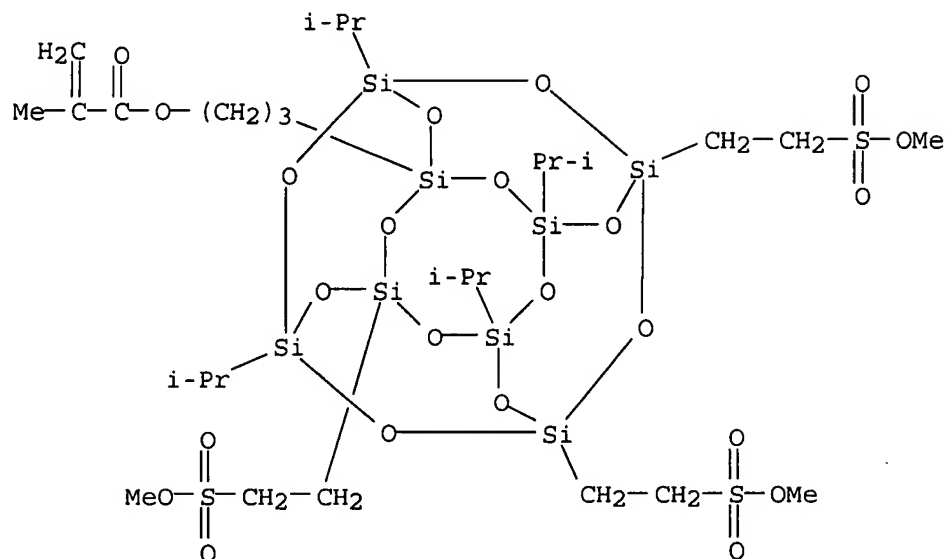
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate and 3-[3,7,13-tris[2-(methoxysulfonyl)ethyl]-5,9,11,15-tetrakis(1-methylethyl)pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 760970-42-1

CMF C28 H60 O23 S3 Si8

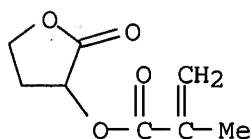
CAS ONLINE PRINTOUT



CM 2

CRN 195000-66-9

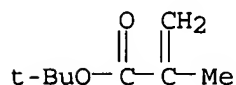
CMF C8 H10 O4



CM 3

CRN 585-07-9

CMF C8 H14 O2



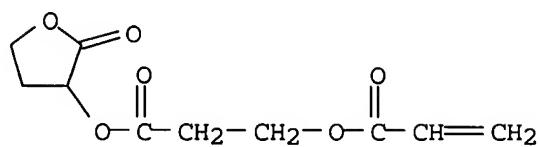
RN 760970-48-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-[3,5,11,13-tetrakis(1-methylethyl)-7,9,15-tris[2-(methanesulfonyl)ethyl]pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxany]propyl ester, polymer with 1,1-dimethylethyl 2-propenoate, 3-oxo-3-[(tetrahydro-2-oxo-3-furanyl)oxy]propyl 2-propenoate and 3-[3,7,13-tris[3-(methanesulfonyl)propyl]-5,9,11,15-tetrakis(1-methylethyl)pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxany]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 760970-45-4

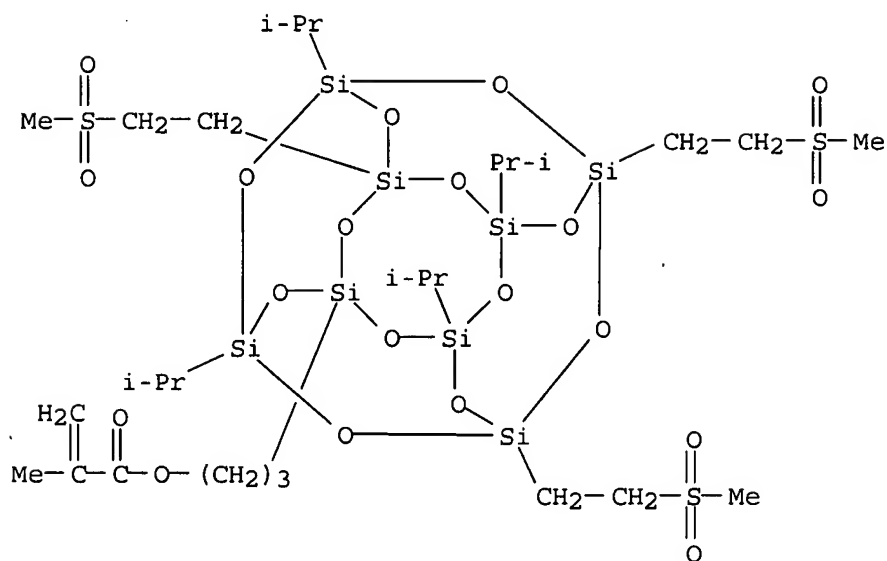
CMF C10 H12 O6



CM 2

CRN 760970-40-9

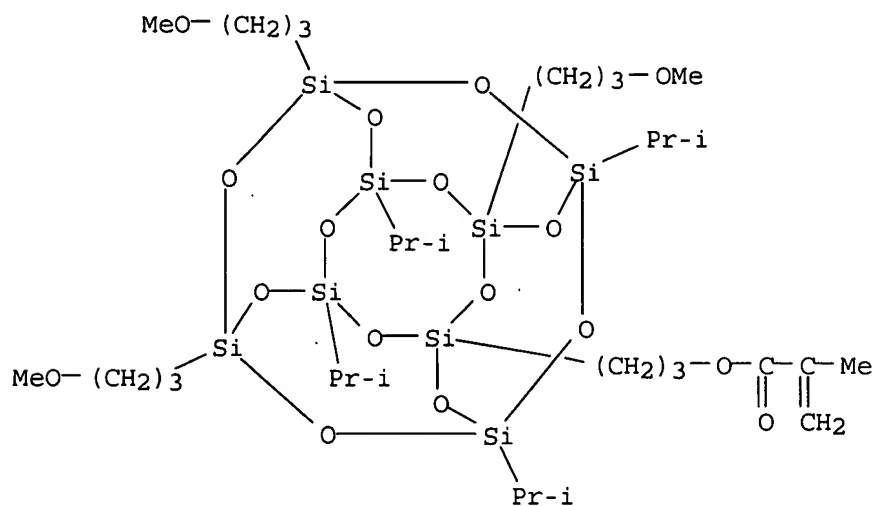
CMF C28 H60 O20 S3 Si8



CM 3

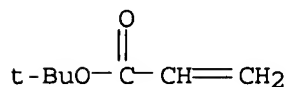
CRN 760970-38-5

CMF C31 H66 O17 Si8



CAS ONLINE PRINTOUT

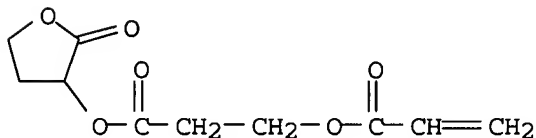
CM 4

CRN 1663-39-4
CMF C7 H12 O2

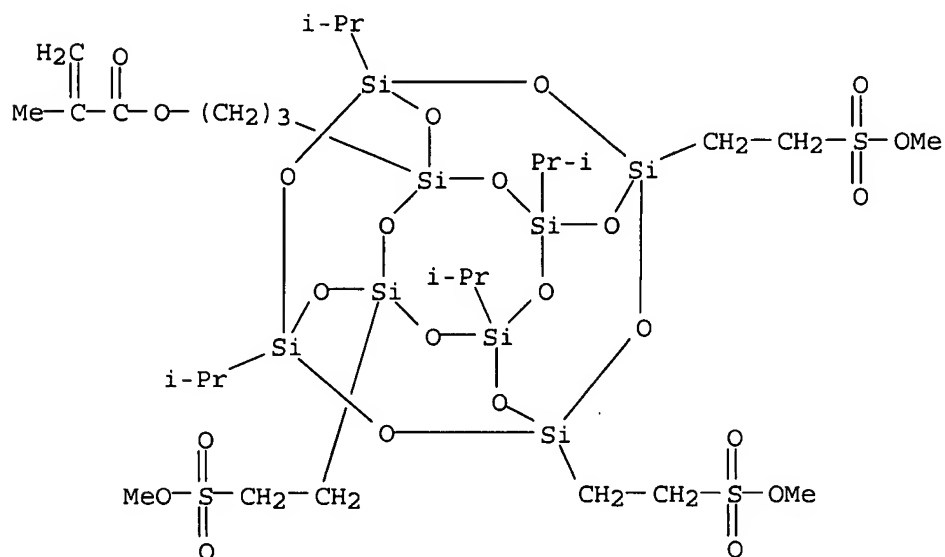
RN 760970-49-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-[heptakis(1-methylethyl)pentacyclo[9.5.1.1.3,9.15,15.17,13]octasiloxanyl]propyl ester, polymer with 1,1-dimethylethyl 2-propenoate, 3-oxo-3-[(tetrahydro-2-oxo-3-furanyl)oxy]propyl 2-propenoate and 3-[3,7,9-tris[2-(methoxysulfonyl)ethyl]-5,11,13,15-tetrakis(1-methylethyl)pentacyclo[9.5.1.1.3,9.15,15.17,13]octasiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 760970-45-4
CMF C10 H12 O6

CM 2

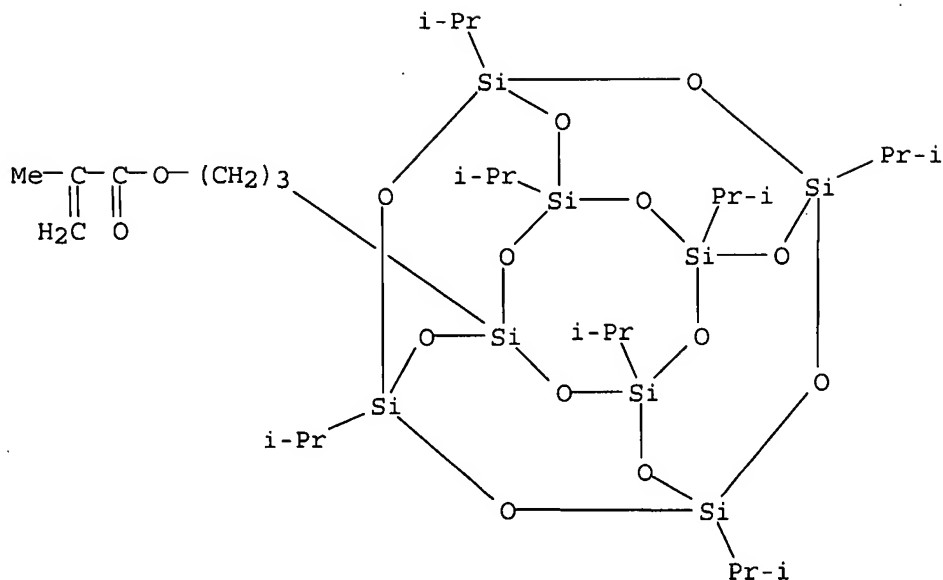
CRN 760970-42-1
CMF C28 H60 O23 S3 Si8

CAS ONLINE PRINTOUT

CM 3

CRN 760970-22-7

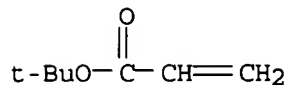
CMF C28 H60 O14 Si8



CM 4

CRN 1663-39-4

CMF C7 H12 O2



L25 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:753226 CAPLUS

DN 141:285793

TI Positive resist composition

IN Adegawa, Yutaka

PA Fuji Photo Film Co., Ltd., Japan

SO Eur. Pat. Appl., 63 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1457822	A2	20040915	EP 2004-4962	20040303
	EP 1457822	A3	20040922		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
	JP 2004264767	A	20040924	JP 2003-57343	20030304
	US 2004180288	A1	20040916	US 2004-792306	20040304

CAS ONLINE PRINTOUT

US 6969577 B2 20051129

PRAI JP 2003-57343 A 20030304

AB A pos. resist composition comprises (A) a resin having a specific structure as according to the claims and capable of decomposing under action of an acid to increase solubility in an alkali developer, and (B) a compound capable of generating an acid upon irradiation with an actinic ray or radiation. The object of the invention is to provide a pos. resist composition which is adaptable for exposure to far UV radiation using ArF and KrF as light sources in the process of manufacturing semiconductor devices and has various performance improvements, including heightened resolution, excellent mask linearity of CD, scum free, reduced thinning of resist film and reduced SEM shrink.

IT 757241-82-0P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. resist composition)

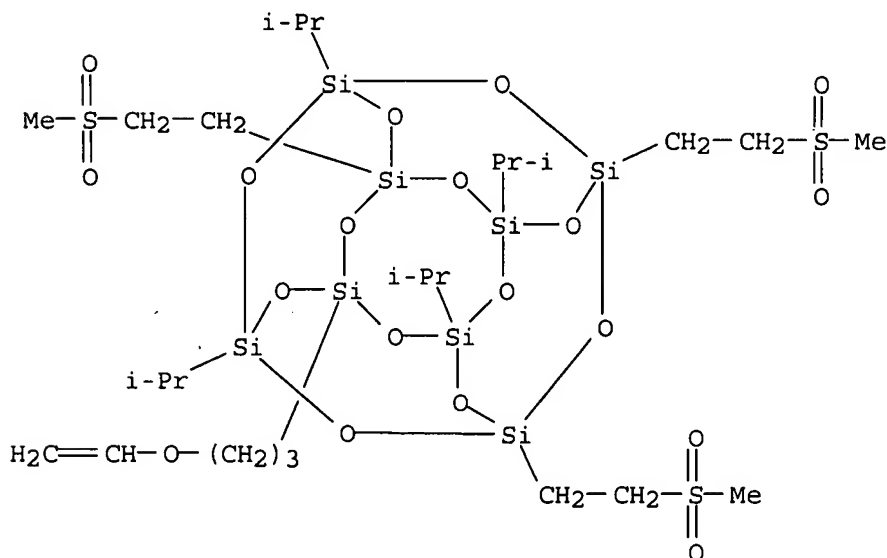
RN 757241-82-0 CAPLUS

CN 2-Butenedioic acid, bis(1,1-dimethylethyl) ester, polymer with 1-[2-(ethenyloxy)propyl]-3,5,11,13-tetrakis(1-methylethyl)-7,9,15-tris[2-(methylsulfonyl)ethyl]pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxane and ethyl hydrogen 2-butenedioate (9CI) (CA INDEX NAME)

CM 1

CRN 757241-81-9

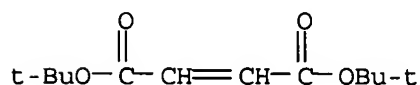
CMF C26 H58 O19 S3 Si8



CM 2

CRN 120515-31-3

CMF C12 H20 O4

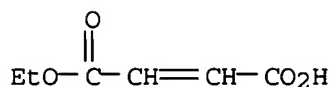


CAS ONLINE PRINTOUT

CM 3

CRN 3249-53-4

CMF C6 H8 O4



IT 757241-80-8

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(pos. resist composition)

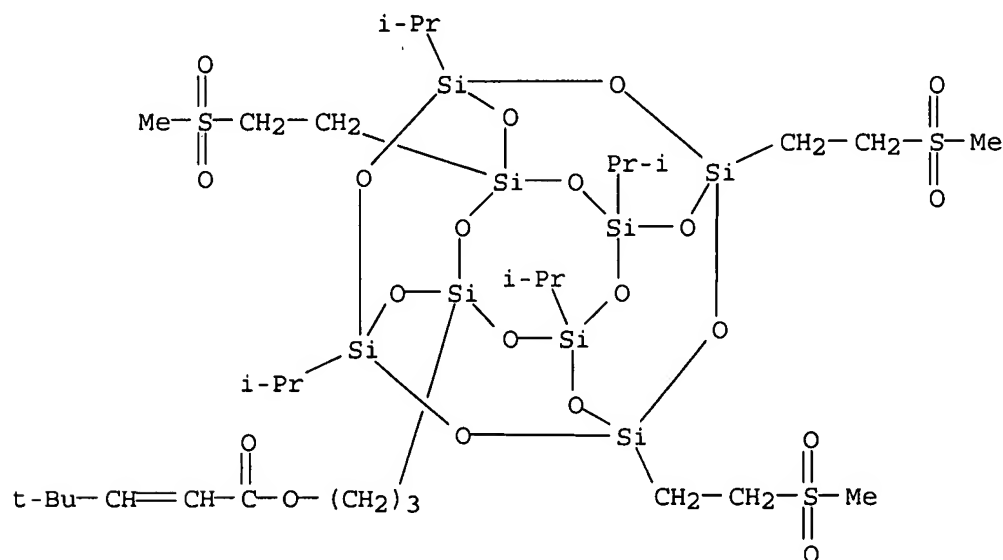
RN 757241-80-8 CAPLUS

CN 2-Pentenoic acid, 4,4-dimethyl-, 3-[3,5,11,13-tetrakis(1-methylethyl)-7,9,15-tris[2-(methylsulfonyl)ethyl]pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]propyl ester, polymer with 1,1-dimethylethyl 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 757241-79-5

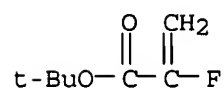
CMF C31 H66 O20 S3 Si8



CM 2

CRN 85345-86-4

CMF C7 H11 F O2



CAS ONLINE PRINTOUT

L25 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:143166 CAPLUS

DN 140:181981

TI Silicone compound useful as polymerization initiator for living radical polymerization

IN Ohno, Kohji; Tsujii, Yoshinobu; Fukuda, Takeshi

PA Chisso Corporation, Japan

SO PCT Int. Appl., 94 pp.

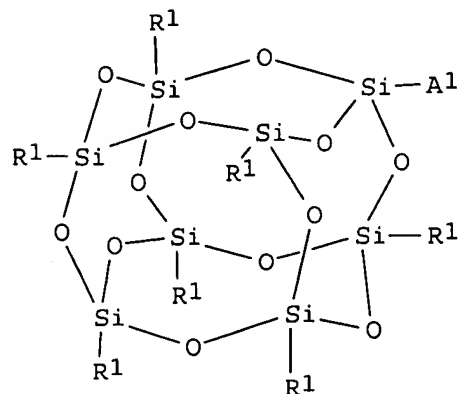
CODEN: PIXXD2

DT Patent

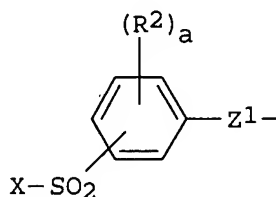
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004014924	A1	20040219	WO 2003-JP10084	20030807
	W: JP, US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
	EP 1548020	A1	20050629	EP 2003-784585	20030807
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
	US 2005288468	A1	20051229	US 2005-523702	20050309
PRAI	JP 2002-229790	A	20020807		
	JP 2002-378150	A	20021226		
	WO 2003-JP10084	W	20030807		
OS	MARPAT 140:181981				
GI					



I



II

AB The present invention relates to silsesquioxane derivs. I, which are good living radical polymerization initiators, wherein R1 = independently H, alkyl, (un)substituted aryl, or (un)substituted arylalkyl; Al = halogenated sulfonyl group-substituted organic group, preferably II; X = halogen; R2 = alkyl; a = 0-2 integer; and Z1 = a single bond or C1-10 alkylene. The silsesquioxanes initiate acrylic monomers and an acrylic polymer are formed from one site of the silsesquioxane structure. Since the halogenated sulfonyl group has strong electrophilicity, various silsesquioxane derivs. can be synthesized by reacting the silicon compound with various nucleophilic reagents. The silicone compound can hence be used as an intermediate useful in organic syntheses. Thus, 211.5 g phenyltrichlorosilane was hydrolyzed to give a silsesquioxane with weight average

mol. weight 3100, sodium hydroxide was added therein and reacted to give a

CAS ONLINE PRINTOUT

sodium phenylsilsesquioxane, 10 g of which was reacted with 10.17 g 2-(4-chlorosulfonyl)ethyltrichlorosilane methylene chloride solution to give a sulfonyl chloride-substituted phenylsilsesquioxane, which was used for the polymerization of Me methacrylate in the presence of L-sparteine and cuprous

bromide, giving polymethyl methacrylate with conversion 6.51 mol%, Mn 3000, and polydispersity 1.11.

IT 660392-78-9P 660392-79-0P 660392-80-3P
660392-81-4P 660392-82-5P 660392-83-6P
660426-09-5P

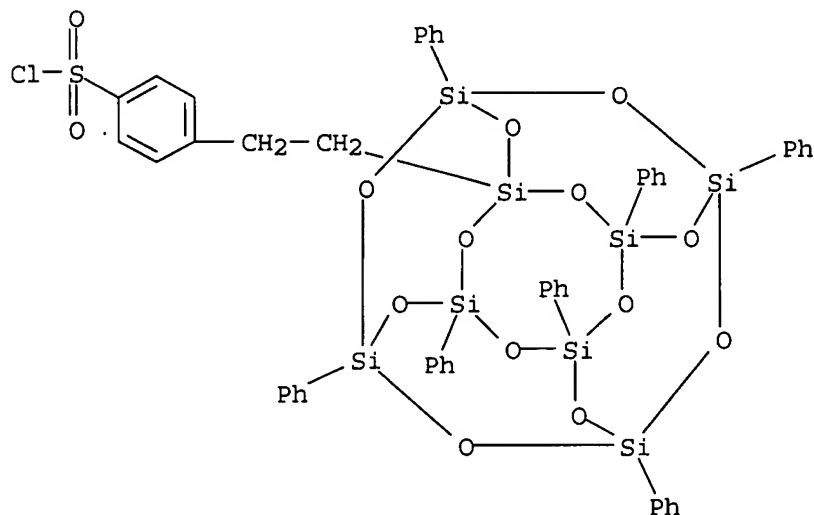
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
USES (Uses)

(polymerization initiator; silicone compound useful as polymerization initiators for

living radical polymerization)

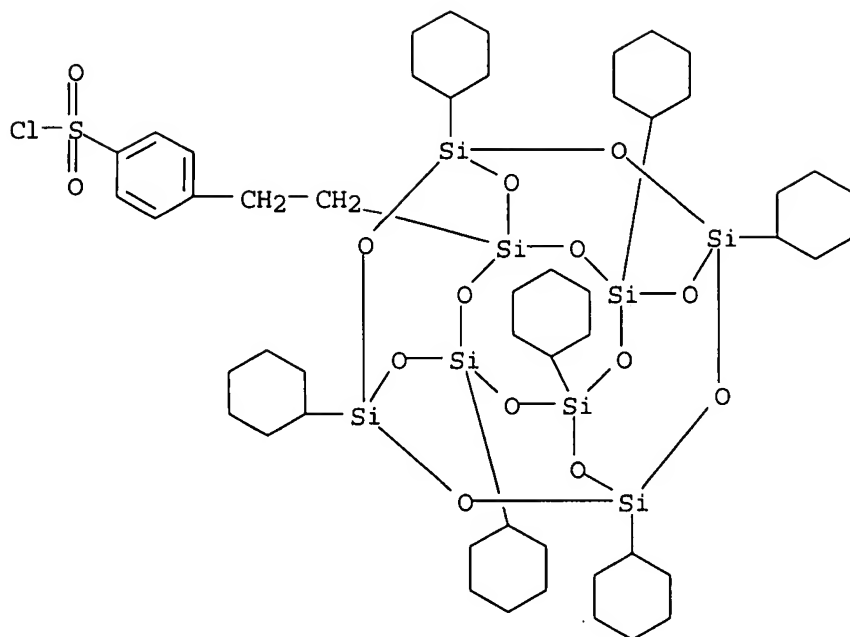
RN 660392-78-9 CAPLUS

CN Benzenesulfonyl chloride, 4-[2-(heptaphenylpentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl)ethyl]- (9CI) (CA INDEX NAME)

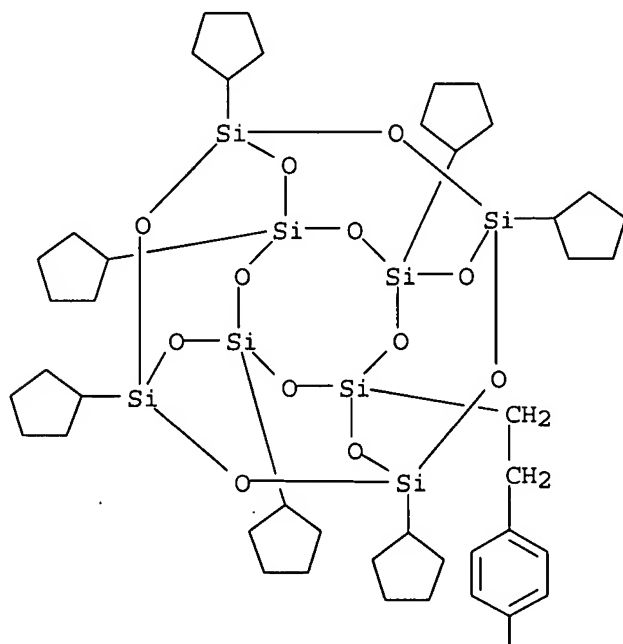


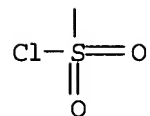
RN 660392-79-0 CAPLUS

CN Benzenesulfonyl chloride, 4-[2-(heptacyclohexylpentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl)ethyl]- (9CI) (CA INDEX NAME)



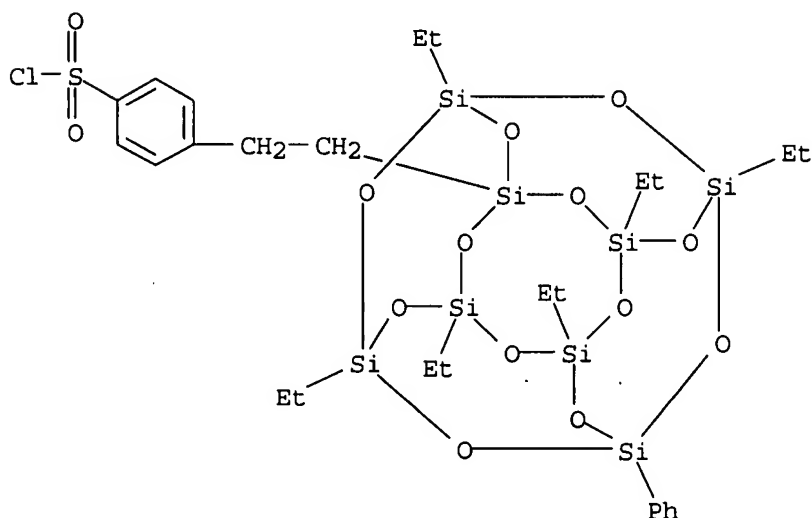
RN 660392-80-3 CAPLUS
CN Benzenesulfonyl chloride, 4-[2-(heptacyclopentylpentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl)ethyl]- (9CI) (CA INDEX NAME)





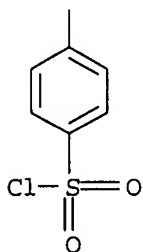
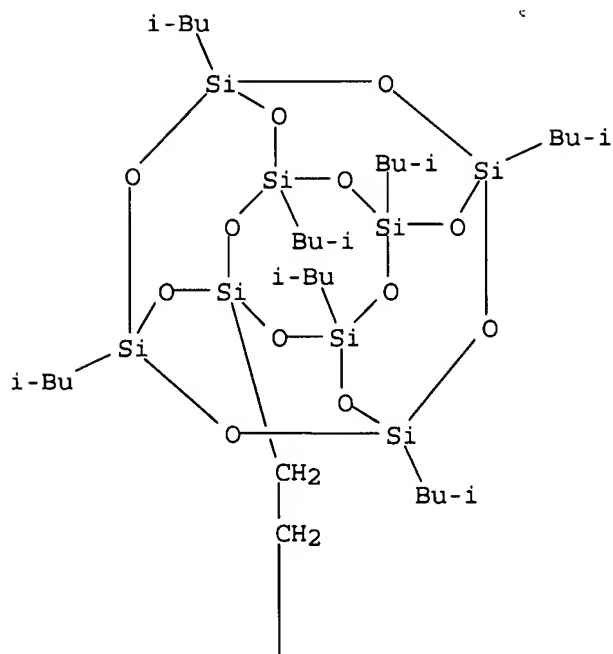
RN 660392-81-4 CAPLUS

CN Benzenesulfonyl chloride, 4-[2-(3,5,9,11,13,15-hexaethyl-7-phenylpentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl)ethyl]- (9CI) (CA INDEX NAME)

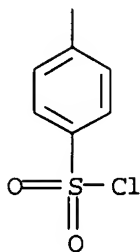
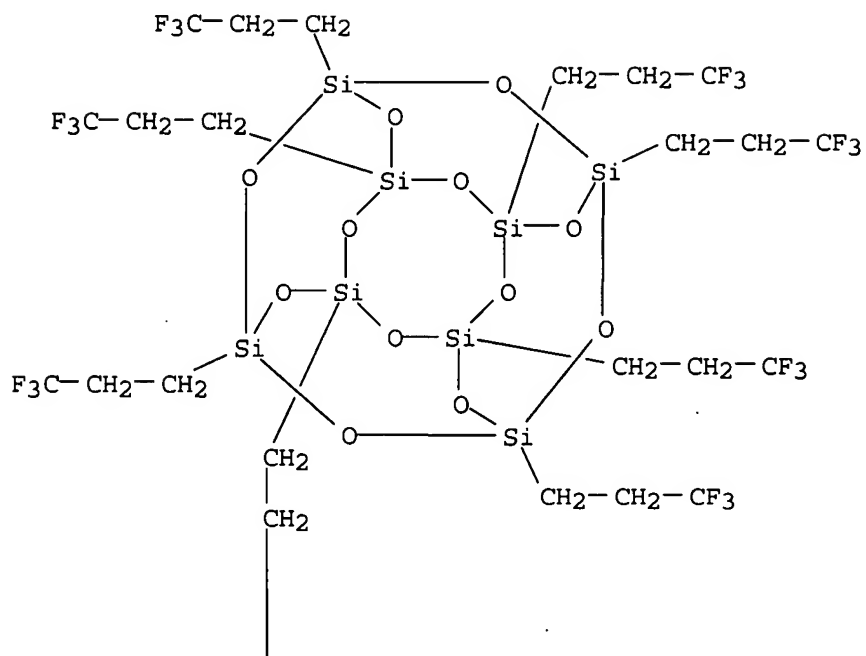


RN 660392-82-5 CAPLUS

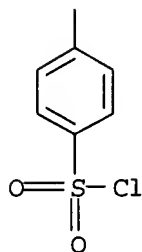
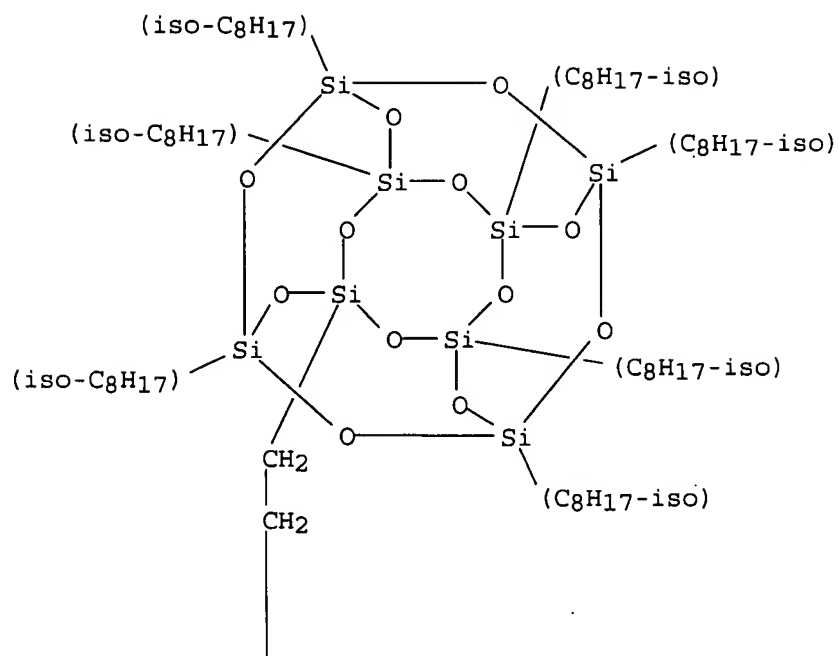
CN Benzenesulfonyl chloride, 4-[2-[heptakis(2-methylpropyl)pentacyclo[9.5.1.1.3,9.15,15.17,13]octasiloxanyl)ethyl]- (9CI) (CA INDEX NAME)



RN 660392-83-6 CAPLUS
CN Benzenesulfonyl chloride, 4-[2-[heptakis(3,3,3-trifluoropropyl)pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]ethyl]-(9CI) (CA INDEX NAME)



RN 660426-09-5 CAPLUS
 CN Benzenesulfonyl chloride, 4-[2-(heptaisooctylpentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl)ethyl]-(9CI) (CA INDEX NAME)



RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=>

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1294	SILSESQUIOXANE.CLM.	US-PGPU B; USPAT	OR	OFF	2007/05/31 09:35
L2	15	SILSESQUIOXANE DERIVATIVE.CLM.	US-PGPU B; USPAT	ADJ	OFF	2007/05/31 09:35